

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/745,512	HAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Seung H Lee	2876	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02 September 2004.
2. ☒ The allowed claim(s) is/are 12-34.
3. ☒ The drawings filed on 22 December 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date <u>20040902</u>.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____.</li> </ol> |
|---|--|

**DETAILED ACTION**

**EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.
2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Henry I. Schanzer (REG. NO. 25,219) on 02 September 2004.

**The application has been amended as follows:**

3. Specification has been amended as follows:  
Page 19, line 4: delete "would be truly unique. The patterns"  
Page 25, line 16: delete "and is therefore unique"  
Page 27, line 15: Substitute "unique" with --random--.
4. Claims have been amended as follows:  
(see the version with markings to show changes made, attached)  
Please cancel claims 1-11.

Art Unit: 2876

12. (currently amended) A method for impeding a counterfeiting of an instrument having top and bottom surfaces defining a space therebetween comprising the step of:

forming a random optical pattern in one of (a) said top surface, (b) said bottom surface and (c) the space between said top and bottom surfaces, for producing an instrument having an optical pattern which is extremely difficult to duplicate, whereby said random optical pattern and corresponding spectral response are normally different than an optical pattern and a spectral response of any other instrument.

19. (currently amended) A method as claimed in claim 12 further including the steps of:

illuminating the instrument for producing a signal pattern indicative of the random pattern within the instrument; sensing the signal pattern corresponding to the random pattern; and

encoding information corresponding to the signal pattern on an information storage medium located on the instrument.

20. (currently amended) In an optical data storage disc having a central region with a first translucent annular region surrounding the central region and having a second region surrounding the first region, said second region for storing information to be read by a reading device, the improvement comprising:

a random optical pattern formed within said first region for producing a disc which is extremely difficult to duplicate and having a spectral response within the first translucent region of the disc which is generally different from an optical pattern and a spectral response of any other disc.

23. (currently amended) A combination for impeding a counterfeiting of an optical data storage disc comprising:

an optical data storage disc having a central region with a first translucent annular region surrounding the central region and having a second region surrounding the first region, said second region for storing information to be read by a reading device;

means for forming a random optical pattern within said first region;

means for sensing selected characteristics of the random optical pattern formed in the first region and encoding data corresponding thereto within said second region of the disc; and

means for subsequently sensing the pattern formed within the first region and for reading the corresponding encoded data within the second region to validate the disc.

27. (currently amended) A system for impeding a counterfeiting of an optical data storage disc comprising: an optical data storage disc having a central region with a first translucent annular region surrounding the central region and having a second region surrounding the first region, said second region for storing information to be read by a reading device;

means for forming a random optical pattern within said first region which is extremely difficult to duplicate;

means for sensing selected characteristics of the random optical pattern formed within the first region and encoding data corresponding thereto within said second region of the disc; and

Art Unit: 2876

means for subsequently sensing the pattern formed within the first region and for reading the corresponding encoded data within the second region to determine the validity of the disc.

***Allowable Subject Matter***

1. Claims 12-34 are allowed.
2. The following is an examiner's statement of reasons for allowance:

Although, the best prior art of record to Brindze et al. [US 5,822,291] and Bejerano et al. [US 4,270,153] teach an optical disk comprises a first translucent region having a unique identification by assigning a unique serial number to each disc. However, Brindze et al. and Bejerano et al. taken alone or in combination thereof fail to specifically teach that the such identification is generated/formed in an random optical pattern as shown in figure 20A of drawing in which the random optical pattern and the corresponding spectral response are unique to any other instrument as set forth in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**


Any inquiry concerning this communication or earlier communication from the examiner should be directed to Seung H. Lee whose telephone number is (571) 272-2401. The examiner can normally be reached on Monday to Friday from 7:30 AM to 4:00 PM.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee, can be reached on (571) 272-2398. The fax-phone number for this group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [seung.lee@uspto.gov].

*All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.*

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

  
Seung H. Lee  
Art Unit 2876  
September 02, 2004



**THIEN M. LE  
PRIMARY EXAMINER**

**A complete listing of claims with markings to show changes made**

12. (currently amended) A method for impeding [the] a counterfeiting of an instrument having top and bottom surfaces defining a space therebetween comprising the step of:

forming a random optical [patterns] pattern in one of (a) said top surface, (b) said bottom surface and (c) the space between said top and bottom surfaces, for producing an [whereby each] instrument [has] having an optical pattern which is extremely difficult to duplicate, whereby said random optical pattern and corresponding spectral response are normally different than an optical pattern and a spectral response of any other instrument.

13. (original) A method as claimed in claim 12 wherein the instrument is an optical data storage disc having a region which is translucent and wherein the step of forming random optical patterns includes distributing a multiplicity of strands randomly between the top and bottom surfaces within said translucent region.

14. (original) A method as claimed in claim 13 wherein the strands are opaque fibers.

15. (original) A method as claimed in claim 12 wherein the instrument is an optical data storage disc having a region which is translucent and wherein the step of forming random optical patterns includes etching or laser burning a multiplicity of randomly selected points on one of the top and bottom surfaces within said translucent region.

Art Unit: 2876

16, (original) A method as claimed in claim 12 wherein said instrument is an optical data storage disc having a first annular region extending a given distance from the center of the disc and having a second annular region extending between the first annular region and the edge of the disc, wherein said first annular region is translucent and said second annular region is for the storing of data to be read; and wherein the step of forming random patterns includes the step of distributing a multiplicity of strands randomly between the top and bottom surfaces within said first annular region.

17. (original) A method as claimed in claim 16 wherein said strands are opaque fibers.

18. (original) A method as claimed in claim 12 wherein said instrument is an optical data storage disc having a first annular region extending a given distance from the center of the disc and having a second annular region extending between the first annular region and the edge of the disc, wherein said first annular region is translucent and said second annular region is for the storing of data to be read; and wherein the step of forming random patterns includes the step of etching or laser burning a multiplicity of randomly selected points on one of the top and bottom surfaces within said translucent region.

19. (currently amended) A method as claimed in claim 12 further including the steps of:



illuminating the [card] instrument for producing a signal pattern indicative of the random pattern within the instrument; sensing the signal pattern corresponding to the random pattern; and

encoding information corresponding to the signal pattern on an information storage medium located on the instrument.

20. (currently amended) In an optical data storage disc having a central region with a first translucent annular region surrounding the central region and having a second region surrounding the first region, said second region for storing information to be read by a reading device, the improvement comprising: a random optical pattern formed within said first region for producing a disc which is extremely difficult to duplicate and having a spectral response within the first translucent region of the disc which is generally different from [that] an optical pattern and a spectral response of any other disc.

21. (original) In an optical data storage disc as claimed in claim 20, wherein information pertaining to the random optical pattern present in the first translucent region is stored in the second data storage region.

22. (original) In combination with an optical data storage disc as claimed in claim 20 further including:

Art Unit: 2876

means for sensing selected characteristics of the random optical pattern formed in the first region and encoding data corresponding thereto within said second region of the disc;

and means for subsequently sensing the pattern formed within the first region and for reading the corresponding encoded data within the second region to validate the disc.

23. (currently amended) A combination for impeding [the] a counterfeiting of an optical data storage disc comprising:

an optical data storage disc having a central region with a first translucent annular region surrounding the central region and having a second region surrounding the first region, said second region for storing information to be read by a reading device;

means for forming a random optical pattern within said first region;

means for sensing selected characteristics of the random optical pattern formed in the first region and encoding data corresponding thereto within said second region of the disc; and

means for subsequently sensing the pattern formed within the first region and for reading the corresponding encoded data within the second region to validate the disc.

24. (original) A combination as claimed in claim 23 wherein said means for forming a random optical pattern within said first annular region includes the placement of opaque strands within said first region.

25. (previously amended) A combination as claimed in claim 23 wherein said optical disc has top and bottom surfaces, and wherein the random optical pattern is formed between the top and bottom surfaces.

26. (original) A combination as claimed in claim 23 wherein said means for forming a random optical pattern within said first annular region includes one of etching and laser scribing selected portions of the first annular region of the disc.

27. (currently amended) A system for impeding [the] a counterfeiting of an optical data storage disc comprising: an optical data storage disc having a central region with a first translucent annular region surrounding the central region and having a second region surrounding the first region, said second region for storing information to be read by a reading device;

means for forming a random optical pattern within said first region which is extremely difficult to duplicate [for altering the spectral response of the first region];

means for sensing selected characteristics of the random optical pattern formed within the first region and encoding data corresponding thereto within said second region of the disc; and

means for subsequently sensing the pattern formed within the first region and for reading the corresponding encoded data within the second region to determine the validity of the disc.

28. (previously amended) A system as claimed in claim 27 wherein said means for forming a random optical pattern within said first annular region includes the placement of opaque strands within said first region,

29. (previously amended) A system as claimed in claim 27 wherein said means for forming a random optical pattern within said first annular region includes one of etching and laser scribing selected portions of the first region.

30. (original) The method as claimed in claim 12 wherein the instrument includes a portion for storing data and wherein the step of forming the optical pattern on or within the instrument occurs simultaneously with the step of writing data into the portion of the instrument intended for the storing of data.

31. (original) A method as claimed in claim 12 wherein said instrument is an optical data storage disc having a first annular region extending a given distance from the center of the disc and having a second annular region extending between the first annular region and the edge of the disc, wherein said first annular region is translucent and said second annular region is for the storing of data to be read; and wherein the step of forming random optical patterns in one of (a) said top surface, (b) said bottom surface and (c) the space between said top and bottom surfaces occurs at the same time as the step of writing data to be stored; the random optical patterns being formed within the first annular region and the data to be stored being written in the second annular region.

32. (original) In an optical storage disc as claimed in claim 20 wherein the random optical pattern is formed within said first region at the same time as the storing of information into said second region.

33. (original) A combination as claimed in claim 23 wherein the random optical pattern is formed within said first region at the same time as information to be read is stored in the second region.

34. (original) A system as claimed in claim 27 wherein said information to be read by said reading device is introduced into the disc at the same time as the random optical pattern is formed in said first region.